Chapter 14

Communication for sustainable development: applications and challenges

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The way in which communication has been conceptualized and applied in development has already been treated in other sections of this book. Nevertheless, it might be valuable to reflect in more depth about how communication is being conceived and applied when referred more specifically to sustainable development. This term is formally associated with the general definition, as it evolved at the Earth Summit held in Rio de Janeiro in 1992, that expected sustainable development to "equitably meet development and environmental needs of present and future generations". While such a definition provides a common base of understanding, it does not grant a precise and consistent conception of what is entailed in practical terms. Keeping in mind that many organizations do not always share a similar conception, sustainable development is usually considered to embrace two basic dimensions: the environment and rural development. Some organizations, such as the World Bank, also include the social dimension as a key area in this respect[1].

Combining the three dimensions mentioned above allows maintenance of a conception capable of embracing a wide range of development issues while also establishing a direct link between people, and in particular the poorest and most marginalized sectors of society, and the initiatives aimed at improving their lives. It is quite evident how rural and environmental issues are closely interrelated with social issues. All are concerned with how people use the available

1 Some organizations explicitly refer to the economic dimension as a key component in sustainable development, though this can be considered as running across all the dimensions.

resources and, ultimately, they are all about poverty alleviation. Even if it would be wrong to reduce development to the struggle against poverty, there is little doubt that currently this is the main front, as is also reflected in the Millennium Development Goals (MDGs).

Table 1: Millennium Development Goals

1. Eradicate extreme poverty and hunger	2. Achieve universal primary education
3. Promote gender equality and empower women	4. Reduce child mortality
5. Improve maternal health	6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability	8. Develop a global partnership for development

The above goals have been recognized as key indicators of sustainable development (World Bank, 2001) and, though only one goal specifically addresses the environment (i.e. No. 7), the 'sustainability factor' is present in virtually every MDG. Issues related to health, education and gender are pertinent to most aspects of social and rural development, and so are crucial for ensuring sustainability.

Communication, in its wide range of conceptions and applications, is instrumental in dealing effectively with the issues mentioned above. For instance, let us consider three broad categorizations into which development communication can be divided: communication for behaviour change, communication for social change (or participatory communication) and advocacy. The way these approaches are selected and applied usually depends upon the purpose of the intervention. Each of them might be based not only on different functions, but often also on different overall purposes (e.g. to change specific practices or to empower), different communication perspectives (e.g. a linear model for media campaigns or a dialogical model to facilitate mutual understanding and trust building) and different methodological approaches. The fact that these differences at times imply divergent, if not conflicting, positions, should be a cause for concern. The variety of approaches and perspectives is often considered an asset of communication, though unless there is a common, consistent theoretical framework upon which to draw, that richness of approaches and perspectives can actually be considered one of its major weaknesses.

Achieving sustainability in rural development depends largely on the way stakeholders perceive the proposed change and the way they are involved in assessing and deciding about how that change should be achieved. Thus, one of communication's main roles has become to facilitate people's participation, and this is acquiring a rapidly increasing relevance in sustainable development, at least formally. Any intervention, be it in the social, rural or environmental dimension, needs to be based on a participatory model in order to be sustainable. The consensus around this issue seems to be almost universal. Currently, there is no development organization that does not put the notion of participation at the forefront of its overall mission.

Participation and empowerment can be considered the two major pillars of communication for sustainable development. As a concept, participation is highly praised and widely used but, most probably, it is even more widely misused. Research conducted in this area (Mefalopulos, 2003) has confirmed that participation is not only used in ambiguous and often inconsistent ways, but it can also be conceptualized and applied in different ways within the same project or programme. In the operational routines of development projects and programmes, the term participation can be encountered in a number of different contexts, none of which might actually carry the genuine sense of participation, i.e. play an active role in the decision-making process. Defining precisely what is implied by a "genuine application of participation" is certainly a major challenge.

Among the many classifications on the subject, Pretty (Pretty et al, 1995) presents an interesting one, identifying seven different kinds of applications, based on the way development organizations interpret and apply participation in the field. He starts from passive participation, where people are considered to be participating merely by showing up at meetings, and ends up with self-mobilization, where the stakeholders take full control of decisions regarding their lives. In between these two extremes there is a range of possibilities, none of which can be considered to be fully participatory. Hence, the wide formal consensus on the need for including participation in sustainable development is sensibly weakened at the implementation stage by the improper and partial notion that is often used when participation is conceived and applied.

This leads to what can be considered to be the second pillar of communication for sustainable development: empowerment. The rise in the relevance of this concept has occurred more recently than that of participation. Empowerment is another 'charged' term in the context of sustainable development, as it is used in a number of different ways. One of the most referred to is the notion that empowerment is about individuals taking control of decisions regarding their own life or, as Freire (1997) stated, that it is about individuals liberating themselves from structures and relationships of domination. A World Bank publication (Narayan, 2002: 14) gives a definition which is not too far from this conception: "Empowerment is the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives".

In the 1990s, a Food and Agriculture Organization (FAO) project supported the establishment of the Centre of Communication for Development under the auspices of the Southern Africa Development Community. Among other activities, the Centre developed an innovative methodology known as Participatory Rural Communication Appraisal, or PRCA. This is a methodology that combines participatory approaches with communication methods aimed at investigating issues, especially in rural settings, while building the capacities of the individuals involved in the process. As the FAO/SADC handbook (Anyaegbunam et al, 1998: 49) states: "Unlike traditional communication

research, PRCA does not only reveal the best ways of designing messages for the grassroots. It also helps to identify strategies and materials to enable rural people articulate their own perceptions of community needs, local knowledge, opportunities, problems and solutions…". The articulation of one's own knowledge, perceptions and reality is the key to genuine participation, where stakeholders have the power to shape the decision-making process.

By combining participation and empowerment in the daily practices of communication for development, PRCA allows stakeholders to play an active role in defining their realities and priorities. This strengthened the added value of such an approach for the sustainability of projects, on the one hand, but on the other revealed a number of contradictions or 'disjunctures' between the normative conception and the practical applications, as we discuss in the next section. In the meantime, it should be noted that the process followed in communication for sustainable development does not differ greatly from communication approaches in other sectors, e.g. health. Though at the needs assessment phase more attention might be paid to long-term environmental implications or to issues of particular interest in the rural context, the overall process follows a similar pattern. The proper application of communication for development (i.e. through a horizontal, dialogical model) appears to carry implicitly higher potential for sustainability.

Mapping out disjunctures

Despite the fact that communication is highly praised by virtually every major development stakeholder and decision-maker, communication specialists in this field still complain that it is not applied consistently and effectively (Mefalopulos, 2003). The reasons for this apparent contradiction are numerous, though they most often diverge along the lines of theoretical versus operational considerations. There can be little doubt that the current development conception, even if it is gradually evolving, is still rooted in what can be referred to essentially as the positivist paradigm; i.e. there is only one reality and it can be uncovered only by using the correct, scientific method. On the other hand, the communication model has evolved towards a more participatory and complex dimension of development, which should account for a multiplicity of perspectives as indicated by Servaes (1990, 1999) and others.

The newly emerging paradigm is rooted in constructivism, where it does not matter if there is one or more than one reality, since even if there is a single reality, it could never be fully and objectively accounted for. The ontological, epistemological and methodological implications of this conception are far reaching, as illustrated by Guba (1990). To be consistent with this paradigm, reality can only be conceived as socially constructed, and no single reality can be assumed to be the correct or 'true' one. It follows that communication is essential in defining and comparing the multiplicity of realities and that a traditional, top-down conception of development, where decisions are taken by those 'who know better', should be abandoned altogether in favour of people-centred, endogenous processes of decision-making.

The latter statement might seem quite radical and yet it is simply the logical consequence of what is being said and preached in the development arena by decision-makers and practitioners alike. A communication model based on genuine dialogue would almost automatically produce participation and empowerment (Anyegbunam et al, 1998; Bohm, 1996; Freire, 1997). This carries a number of implications, which are not always easy to comply with, given the current structure of development. For instance, many development projects and programmes are still initiated and planned in cities far away from the affected areas. This constitutes a definite impediment to full participation and correct adoption of communication, as we shall discuss later.

Another obstacle in applying a more genuine participatory approach resides in the timeframe within which most projects and programmes are planned and implemented. There can be little doubt that centralized vertical planning allows for tighter control and accounting of time. It makes it easier to set and meet deadlines since in participatory processes the first challenge often starts from the moment an agreement must be reached about when and where to meet. It is easy to see how such a process could take an unpredictable amount of time, which could not be easily 'controlled' by external agents. Similar considerations can be applied to another crucial phase of development interventions: evaluation.

There are very few examples of impact assessment in which those who are often referred to as 'beneficiaries' have been in control of the objectives, design and outcome of the process, even if they are ultimately those most concerned with assessing the impact of the intervention. In order for this to occur, the overall framework of development would need to be adjusted, taking into account the way initiatives are conceived, managed, implemented and evaluated. Until then, genuine participation approaches might have a hard time in being implemented or might result in causing 'disjunctures' among different project components. The following is an example of such a disjuncture, which occurred in a project carried out in a southern African country.

As part of their hands-on training in participatory communication, a group of extensionists at the Ministry of Agriculture carried out a PRCA in some grassroots communities. The overall scope of the project was to provide horticultural sites, and related training, to promote the adoption of a variety of crops in order to increase the communities' food supply. The exercise revealed that many of the original project's objectives were not well-aligned with the communities' needs and perceptions. The extensionists, who had initially taken a defensive stand supporting the project's perspectives and objectives, spent more time with the villagers in the communities and started to understand their perspectives better and value them more.

The extensionists' attitude towards the peasants gradually changed and it became more 'emphatic' regarding the communities' needs and perceptions. This was considered a success by the facilitators of the training programme, whose main objective was to promote the adoption of participatory communica-

tion approaches to strengthen the project's sustainability. Unfortunately, the success of the training programme was counterbalanced by the failure of the project's management to understand and value such an approach. The changes proposed by the extensionists, rooted in their interaction with the farmers, were viewed with suspicion and rejected by the management. As a result, the extensionists felt all the more frustration for having to face both a conflictive situation with their management and the resentment of the villagers, who saw their needs and perspectives being ignored once again.

Applying communication for sustainable development

In September 2004, the Food and Agriculture Organization of the United Nations (FAO) hosted the 9th UN Roundtable on Communication for Sustainable Development in Rome[2]. One of the crucial issues that emerged, and not for the first time, was that in order to guarantee the success and sustainability of development initiatives, participatory communication approaches had to be adopted systematically in all kinds of development interventions. A review of the available data indicates that a significant number of projects and programmes already include communication activities in their operations (Mefalopulos, 2003), and a significant amount of the budget for development initiatives is already devoted to that purpose. If communication is being used increasingly in development projects and programmes, why is there a problem? To put it simply, the difficulty lies in the *when* and the *how*.

The question of how communication can be used to aid development efforts could be answered by presenting a basic typology composed of three cases. Communication can be mainly used to: exchange information and build consensus around specific issues; support the achievement of projects' objectives; and assist in identifying and defining projects' objectives. In the first case, communication is used to inform and/or consult relevant stakeholders about key issues. It usually provides a full picture of a given situation, addressing the identified information gaps and the required changes. An awareness campaign about the causes of AIDS or about the needs for land reform could be examples of this modality. The second case is probably the most frequent, though it is also the least effective, as it usually implies that projects' objectives have already been defined, often in a top-down matter, and communication must help to achieve these objectives no matter how they are perceived by the 'beneficiaries'. The last scenario is more participatory and effective in terms of ensuring a higher degree of sustainability for projects, but as it breaks out of the traditional boundaries of communication, it is not yet widely applied. Here, communication is not about

2 The UN Roundtable meets every two years to examine, discuss and assess current trends in communication for development and to set the priorities for future directions in the field. UNICEF hosted the first roundtable in 1989 in New York, and since then it has become a bi-annual event, dedicated to providing input for development communication programmes and strategic guidance for professionals around the world. The focus of the 2004 Roundtable was on three main themes: natural resources management; research, extension and education; and isolated and marginalized groups.

communicating messages or persuading people to change. It is about building trust, sharing knowledge and experiences, identifying and investigating problems, needs and opportunities and, finally, about defining priorities and solutions.

The participants in the 9th UN Roundtable identified and strongly promoted the idea that communication is a process needed primarily to facilitate dialogue and assess the situation in a participatory manner. The Roundtable final resolution includes a couple of points worth mentioning. First, it should always be remembered that even when we are referring to environmental issues or natural resource management, "communication for development is about people" and, as such, problems cannot be addressed simply by applying a scientific approach without taking into full account the knowledge and perceptions of the people affected by the change. The second point concerns the role of communication, which is considered to be a two-way process aimed at supporting the coming-together of stakeholders, facilitating the assessment of problems and defining strategies leading to change.

Viewed in this way, communication is breaking out of the traditional model, which focused on the transmission of messages. Now, communication is acquiring a more integrated and holistic dimension. It provides a number of approaches, methods and techniques that professional communicators can use to facilitate a social process meant to compare, contrast and construct different perspectives and perceptions, before even attempting to define the objectives of a project. This point was considered so crucial that participants in the 9th Un Roundtable drafted the following proposal in their final recommendations: "Governments, donors and development agencies should require the incorporation of a communication needs assessment in any development initiative (and eventually devote a specific percentage of the budget to this purpose, e.g. 0.5%)."

Development is about change, and if development initiatives of any kind are to be sustainable they should start with mechanisms that ensure broad participation by all those who have some interest in the intended change. Communication, by its very nature, is the essential ingredient in ensuring meaningful participation, capable of resulting in the active exchange of knowledge and perceptions needed to successfully define problems and plan solutions. In this regard, communication goes beyond 'communicating' and enters a sociological dimension where it becomes instrumental in constructing realities or, as Wilkins (1994: 2) noted, in constructing "intersubjective meanings constituting shared realities produced and maintained within social communities". Hence, communication is also needed in understanding, contrasting and sharing the realities of different stakeholders, before even thinking about communicating messages. The multiplicity of realities is a 'fact' that needs to be taken into account, and not a nuisance to be ignored or corrected by trying to impose the proper perspective. Such an assumption (i.e. that there is only one 'correct' reality) has often been identified as one of the major causes of failures in development projects (Anyaegbunam et al, 1998; Mefalopulos, 2003).

An FAO/SADC publication[3] presents an interesting case concerning a water irrigation project initiated by the Ministry of Agriculture of a Southern African country in order to provide food security and more opportunities for a poor rural community in a drought-prone area. One of the major activities of the project was the construction of a dam to allow water for irrigation and better cultivation of the land. The expected results were a wider variety of crops that would ensure not only better nutrition but also additional income revenue for the communities in the area. The Ministry's officers were surprised to see that, as they proceeded with this project, the community reacted with suspicion, if not hostility. When, towards the end of the project, a PRCA[4] was carried out to assess the situation, the results were even more shocking. The perceptions of the community about the project, which the Ministry had envisioned as leading to food security and increased self-confidence, were actually the opposite; i.e. deep insecurity and stress. It is not possible to go into greater detail in this context concerning the causes of this situation. Let us simply state that the divergent views were mainly due to the lack of two-way communication between the project officers and the communities, leading to different conceptions of the project objectives and related activities that were undertaken.

By using dialogue to compare different realities or different perceptions, communication not only plays an instrumental role in building trust among stakeholders but, through the systematic use of dialogue, it also plays a crucial role in problem-analysis and problem-solving. Some institutions are convinced that participation can perform the same functions of communication for development, but this is not the case. The available evidence indicates that participatory approaches, while extremely valuable, are not sufficient to identify and systematically sustain the necessary communication activities and provide the full array of the information needed to effectively assess problems, define objectives, devise strategies and support projects (Mefalopulos, 2003). Moreover, entry points upon which a successful communication strategy could be designed are seldom if ever addressed by participatory assessments, weakening their chance of achieving sustainability. Participatory approaches often suffer from some of the contradictions illustrated above (i.e. partial or improper use of the notion of participation) and there is no guarantee that a participatory assessment will provide precise indications concerning levels of awareness, knowledge or attitudes on a certain topic, or that it will provide an accurate picture of the information and communication system of a community. These and other key issues could be addressed effectively by communication if it were included in the initial phase of development initiatives.

In development, most efforts follow two basic modalities: specific projects, or wider sectoral programmes (e.g. water, agriculture, etc.). Though it

3 Anyaegbunam, C. Mefalopulos, P., and Moetsabi, T. (1998) *PRCA: Starting from the People*, Harare, Zimbabwe: FAO/SADC.

4 Participatory Rural Communication Appraisal, a participatory communication research methodology devised in Southern Africa and mentioned in a previous section.

has been criticized for a number of reasons (Mefalopulos, 2003), the most common mode of operations in development remains 'the project approach', consisting of specific activities designed to address and solve a specific problem or set of problems. Projects are usually managed and operated in a business-like manner, with central planning, and monitoring and evaluation of the activities. The 'project approach' provides a structure that appears to please all the major decision-makers involved in the process or, stated differently (Shepherd, 1998), this approach is still dominant because donors, implementing agencies and recipient countries have a "coincidence of interest around the Project".

Since the project approach is still the most widely used in development operations, it is worth discussing the practices of communication for sustainable development as they relate to the 'project cycle'. This term is defined consistently among development organizations, with certain variations that account for minor differences in the type of categorization rather than for substantial differences (Mefalopulos, 2003). The project cycle can be typically divided into the following phases: 1) identification of area/sector of intervention; 2) research/appraisal; 3) project formulation; 4) planning/strategy design; 5) activities implementation; 6) evaluation (and monitoring). Available data suggest that communication, when included, is often considered in phase four or five, very seldom considered in the project formulation and almost never in the first phase (Mefalopulos, 2003).

The consequences of this delayed inclusion are numerous. First of all, the absence of communication considerations makes it more difficult to involve relevant stakeholders in the decision-making process and account for their perceptions from the beginning, even if participatory tools are adopted at a later stage. The strategic effectiveness of communication is greatly reduced if it has to be incorporated into a project in which decisions regarding objectives and outputs have already been taken and there is little or no room for adjustment. Moreover, regardless of the nature of the communication intervention (e.g. campaign, education, social mobilization, etc.), there are certain information requirements which need to be collected at the very beginning, such as a survey of stakeholders' perceptions (which is as crucial as a scientific study investigating facts), and the identification of influential sources and assessment of the communication/ information system of each group of stakeholders. Moreover, including communication from the very beginning should facilitate the design and inclusion of a baseline, which is essential not only to monitor the process and evaluate the overall impact of the communication intervention, but also very useful in fine-tuning the overall goal and specific objectives of the project.

A baseline based on qualitative inputs, triangulated with quantitative data, would ensure the validity and appropriateness of the intervention proposed. Relevant indicators should be identified from the early stages of the project cycle in order to ensure that the baseline will be effective in guiding and monitoring the project's progress. In the field of communication for sustainable development, a number of institutions are now including specific assessments to account for envi-

ronmental and rural issues from the early phases of projects. Increasingly, environmental assessments are carried out at the beginning of projects considered to be of high visibility. However, when they are conducted by environmental specialists they run the risk of being focused on the 'scientific reality' of the issues in question, neglecting other social dimensions and issues that, even if not directly involved with the environment *per se*, might affect the overall design of the project.

For instance, an assessment carried out for a project aimed at reducing the air pollution in a crowded Asian city focused mainly on the environmental issues and their implications for the people directly affected by this problem, neglecting other relevant aspects. It failed, for instance, to probe and understand the magnitude of the problem from different perspectives, such as future risks to child health. The communication campaign focusing on the health hazards for commuters did not produce any major results, probably because adults were not so concerned about potential health hazards in the long term (as is also indicated by studies on the effects of tobacco). However, if identified at the beginning, a campaign aimed at highlighting the risks and negative effects on child health might have had a bigger impact (maybe by addressing mothers' concerns and using them as a primary channel to convey the message to the primary audience).

From what has been argued so far, it can be inferred that communication for sustainable development is first and foremost about dialogue, participation and empowerment. These are the core elements in which the current perspective of communication is rooted. Even if there is only a limited amount of quantitative evidence, the failures of projects in past decades and current data both indicate that involving people in the decision-making process concerning change affecting their own life increases the chances of success and sustainability in development projects, as is also indicated by documentation produced by the World Bank (1992) and others (Fraser and Restrepo-Estrada, 1998; Mefalopulos, 2003; Shepherd, 1998). However, promoting the adoption of communication for development should not be based purely, or even mainly, on cost-effectiveness considerations. It is the right of every person to be involved in decisions concerning his/her own life, regardless of how time-consuming this can be or what costs are involved. After all, nobody would argue that if a dictatorship is proved to be a more cost-effective form of government it should replace democracy. Similarly, participatory communication should not be adopted only if proved more cost-effective, but also, and above all because it is the 'right' thing to do, as it allows the genuine participation of all stakeholders in the decision-making process concerning change affecting their own lives.

The added value of communication for sustainable development

As already stated, communication for sustainable development is about 'people first'. Unfortunately, current practices do not always seem to adhere to this notion. Environmental issues might have a major impact on a global level, but the

world's poorest citizens cannot demonstrate their full appreciation for those concerns if they have to face a daily struggle for survival. As the oldest villagers in an African rural area said to a group of foreign environmental protectionists trying to convince them to stop hunting protected species: "We agree with you that safeguarding the wildlife is very important, but to us, at the end of the day, being able to feed our people and our children is more important than preserving endangered animals". Sustainability for future generations cannot be achieved unless it also addresses concerns related to the *here* and *now*. Communication can ensure that concerns for the future will be linked with the needs of the present.

The World Bank, one of the major actors in the field of development, has also begun to pay closer attention to this field and in 1998 established a Development Communication Division, or DevComm. The Division's mission is to promote the adoption of strategic communication in all Bank-sponsored projects and programmes. To do this effectively, policy planners and other decision-makers need to be convinced of the value of communication. Ideally, as stated earlier, the ethical value of this approach should be sufficient to incorporate it into the daily routines of development. As this has not been the case, it would be helpful to demonstrate its practical and economical value. Is communication cost-effective? And if so, can how this be proved?

Metaphorically, we could think of communicators as firemen. When called to put out a fire, there is only so much firemen can do, depending on when they were called, how big the fire is, and the resources at their disposal. Calculating the cost of an incident caused by somebody's negligence is not that hard. It can be done by simply calculating the extent of the damage and adding the total cost of the firemen's intervention. By assessing how much has been saved by rapid deployment of the firemen, it is possible to make a precise cost-benefit analysis of their intervention. Now, let us imagine that firemen were asked to participate in an extensive campaign on how to avoid fires caused by domestic negligence. In this case, it would be easy to calculate the cost of the campaign, but how do we calculate the amount of money saved as a result?[5] Similarly, when we are called to address a problem in an on-going project/programme, the communication impact should be calculated keeping in mind that some of the damage has already been done.

If communication had been incorporated from the very beginning of the process, it might have prevented the occurrence of the problems and the related waste of resources. But in such a case, it would be very difficult to assess the cost-effectiveness. How can we measure something that is not there? If communication is properly applied at the beginning, chances are that most problems would be dealt with before they ever occurred. Economists and communication specialists should perhaps sit down together and, rather than assess the cost-

5 A possible way could be a comparative analysis using statistics from previous years, but, in addition to not being very reliable, this would also be impossible in many countries where statistics are not available.

effectiveness of communication, they should assess the cost of, and wasted money involved in, projects and programmes associated with failures due to the lack of proper communication. Putting it another way, if there is a need for an economic perspective on this matter, let us show the added value of communication by highlighting the costs of non-communication!

Conclusions

At this point, let us summarize the main challenges faced by communication in the field of sustainable development and reflect on how we can move forward. Since rural and environmental issues appear to be high on the agenda of development, communication should seize this opportunity to climb the development agenda as a necessary way of supporting people-based change. This can be done by successfully facing three broad challenges, which summarize the issues discussed so far:

1. In sustainable development, the traditional notion of communication based on media and message design is not sufficient to deal with the current challenges of the emerging development framework, based on a strong participatory vision. While development communication specialists seem to be fully aware of this, policy planners and decision-makers appear to be less so. Thus, the latter need to be made to understand that communication is not simply about sending messages, or informing and persuading people in order to change behaviour. Communication professionals must take up the task of 'educating' policy planners and decision-makers about the shifting role of communication. By facilitating mutual understanding and by building trust among stakeholders, communication becomes of critical value in fostering participation and strengthening sustainability. In other words, even before we address practical, operational issues, the purpose and functions of communication, as discussed in this chapter, should be clearly defined and promoted among decision-makers.
2. The next challenge, closely related to the above point, concerns the practices adopted in deciding when to apply communication. Currently, approaches in communication for sustainable development are considered mainly after projects' objectives have been defined, and activities planned. This implies that communication constitutes a stand-alone component supporting these objectives and activities. But to be meaningful and effective, communication should be used strategically as part of the process of investigating key issues, not only matters of communication, and of defining the programmes' and projects' objectives, regardless of their nature. Communication is transversal to any discipline, and applying it from the beginning allows stakeholders to share perceptions, knowledge and practices in a way that facilitates

the identification and design of meaningful programmes, taking into account all the different perceptions, needs and knowledge.

3 The last point concerns the importance of finding ways to assess the impact of communication for sustainable development. This impact should be measured in both quantitative and qualitative terms. To be consistent with the new conception of development, evaluation should also be rooted in a participatory model. This would have major implications for a number of issues, such as what should be measured, which indicators should be adopted and, ultimately, who should be in control of the design related to evaluation. If development is to be based on people's participation, it should follow that the degree of success should also be assessed according to criteria selected by those very same people, i.e. the 'beneficiaries'. For instance, when we assess the impact of a programme aimed at reducing deforestation, the evaluation cannot focus only on progress made in reducing the rate of deforestation, but should also assess how that change has affected people in the area.

In conclusion, it should be reiterated that communication for sustainable development, while being similar in many respects to other communication approaches, is particularly effective in building bridges across various stakeholder groups. It is crucial in filling perception and knowledge gaps that might create problems or hamper chances of success in development efforts. Sustainability presupposes a balance between peoples' present and future needs, which are often related to the environment. Naturally, communication alone cannot always provide solutions to every problem, but it is a highly effective and ethically appropriate approach which can mediate and look for viable solutions, as indicated in the following example that occurred in a Central American country.

The high rate of deforestation in a certain area was drastically reduced when active dialogue between local communities and outside experts brought the realization that there was a market for the resin extracted from the trees. The income generated by selling the resin was comparable to that generated by cutting the trees and selling the wood, but without depleting the resources for future generations.

Certainly, such a perfect solution cannot always be found easily. Nevertheless, to be sustainable, whatever solution or change is identified and agreed upon can only take place with the active involvement of all the relevant stakeholders. Communication for sustainable development is all about that; i.e. the professional application of a set of principles and methods to facilitate the exchange and sharing of knowledge and experiences among the relevant stakeholders. This provides the added value needed to make the assessment, the design, the implementation and the evaluation of development initiatives more effective and more relevant to people, and hence more sustainable.